FlyBy Math™ Alignment
Performance Standards
Mathematics

ALGEBRA
Students will explore functions, solve equations and operate with radical, polynomial and rational expressions.

MA1A1. Students will explore and interpret the characteristics of functions, using graphs, tables, and simple algebraic techniques.

Performance Standards	***FlyBy Math*™ Activities**
e. Relate to a given context the characteristics of a function, and use graphs and tables to investigate its behavior.	--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system. --Use tables, graphs, and equations to solve aircraft conflict problems.
g. Explore rates of change, comparing constant rates of change (i.e., slope) versus variable rates of change. Compare rates of change of linear, quadratic, square root, and other function families.	--Represent distance, speed, and time relationship for constant speed cases using linear equations and a Cartesian coordinate system. --Interpret the slope of a line in the context of a distance-rate-time problem. --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

PROCESS STANDARDS
The following process standards are essential to mastering each of the mathematics content standards. They emphasize critical dimensions of the mathematical proficiency that all students need.

MA1P1. Students will solve problems (using appropriate technology).

Performance Standards	***FlyBy Math*™ Activities**
b. Solve problems that arise in mathematics and in other contexts.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
c. Apply and adapt a variety of appropriate strategies to solve problems.	--Use tables, graphs, and equations to solve aircraft conflict problems.

MA1P3. Students will communicate mathematically.

Performance Standards	***FlyBy Math*™ Activities**
b. Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.	--Predict outcomes and explain results of mathematical models and experiments.

d. Use the language of mathematics to express mathematical ideas precisely.	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system. --Predict outcomes and explain results of mathematical models and experiments.
MA1P4. Students will make connections among mathematical ideas and to other disciplines.	
Performance Standards c. Recognize and apply mathematics in contexts outside of mathematics.	***FlyBy Math™* Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
MA1P5. Students will represent mathematics in multiple ways.	
Performance Standards a. Create and use representations to organize, record, and communicate mathematical ideas.	***FlyBy Math™* Activities** --Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
b. Select, apply, and translate among mathematical representations to solve problems.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
c. Use representations to model and interpret physical, social, and mathematical phenomena.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.